IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Branko KOVACEVIC et al.

For: METHOD AND SYSTEM FOR HANDLING DATA

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The Board of Patent Appeal and Interferences
Commissioner for Patents
PO Box 1450
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BRIEF ON APPEAL

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This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. § 41.37(c)(1)):

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The final page of this brief before the beginning of the Appendix of Claims bears the agent's signature.

I.   REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest in this appeal is ATI Technologies, Inc.

II.   RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

There are no interferences or other appeals that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

III.   STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

     A.   TOTAL NUMBER OF CLAIMS IN APPLICATION

There are thirty-five (35) claims pending in the application (claims 1-35).

     B.   STATUS OF ALL THE CLAIMS

        1.   Claims pending:

        Claims 1-35.

        2.   Claims withdrawn from consideration but not canceled:

        3-5, 11, 12, 25-32 and 35.

        3.   Claims allowed:

        1, 2, 6-10, 13-15, 20 and 21.

        4.   Claims objected to:

        NONE.

        5.   Claims rejected:

        Claims 22-24, 33 and 34 are rejected under 35 U.S.C. § 102(b).

        Claims 16-19 are rejected under 35 U.S.C. § 103(a).

6.   Claims canceled:

NONE.

C.   CLAIMS ON APPEAL

There are seven (7) claims on appeal, claims 16-19 and 22-24.

IV.   STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

No amendments have been submitted subsequent to the Final Rejection.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

The following summary is provided to give the Board the ability to quickly determine where the claimed subject matter appealed herein is described in the present application and is not to limit the scope of the claimed invention.

Independent claim 16 recites a method of parsing a data packet, the method comprising: providing a start indicator (see, e.g., "PACKET START", FIG. 7) to a first parser (see, e.g., TPP 720, FIG. 7), the start indicator indicating a first data block of the data packet (see, e.g., p. 12, para. 3), the data packet having a predetermined number of data blocks (see, e.g., p. 2, last paragraph; p. 11, paras. 3 and 4). The method further comprises analyzing at the first parser (see, e.g., TPP 470, FIG. 7) at least a portion of the first N data blocks after the start of the data packet to determine a data type of a subsequent data block of the data packet, wherein the subsequent data block is after the first N data blocks (see, e.g., p. 14, paras. 1-3; p.27, paras. 2-4); enabling a second parser (see, e.g., video PES parser (PESP) 730, FIG. 7) to receive the subsequent data block when the data type of the subsequent data block is a first data type (see, e.g., p. 14, paras. 2 and 3; p. 29, para. 3); and enabling a third parser (see, e.g., adaptation field parser (AFP) 750, FIG. 7) to receive the subsequent data block when the data type of the subsequent data block is a second data type (see, e.g., p. 14, para. 3, p. 27, paras. 3-5).

Independent claim 22 recites the limitations of a system for storing packetized data, the system comprising: a means for receiving a transmitted data packet (see framer 410, FIG. 5; p. 11, para. 3); a first parser means for analyzing a header of the data packet before a payload

header is received (see TPP 420, FIG. 5; p. 11, para. 4; buffer controller 460, FIG. 5; p. 11, para. 5; p. 12, paras. 2-5; page. 14, paras. 2 and 3), and a second parser means physically separate from the first parser means for analyzing the payload header (see AFP 450 or PES parser 430, FIG. 5; AFP 750 or PES parser 730, FIG. 7; p. 12, paras. 2-5).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

A.   Claims 22-24 are rejected under 35 U.S.C. § 102(b) in view of United States Patent No. 5,517,250 to *Hoogenboom et al* (hereinafter, "the *Hoogenboom* reference") as set forth in the Non-Final Office Actions dated April 9, 2004 and July 13, 2005 (hereinafter, "the Non-Final Actions") and the Final Office Action dated November 30, 2004 (hereinafter, "the Final Action").

B.   Claims 16-19 are rejected under 35 U.S.C. § 103(a) over the *Hoogenboom* reference in view of United States Patent No. 6,043,828 to *Ort* (hereinafter, "the *Ort* reference") as set forth in the Non-Final Actions and the Final Action.

VII.   ARGUMENTS (37 C.F.R. § 41.37(c)(1)(vii))

Based on the arguments and issues below, none of the claims stand or fall together, because in addition to having different scopes, each of the independent claims has a unique set of issues relating to its rejection and appeal as indicated in the arguments below.

A.   Rejection of Claims 22-24 under 35 U.S.C. § 102(b):

At page 2 of the Non-Final Action, claims 22-24 were rejected under 35 U.S.C. § 102(b) as being anticipated by the *Hoogenboom* reference. The Non-Final Action asserts that the *Hoogenboom* reference discloses all of the limitations recited by claims 22-24. Contrary to the assertions of the Non-Final Action, the *Hoogenboom* reference fails to disclose each and every limitation recited by claims 22-24 for at least the reasons provided below.

Under 35 U.S.C. § 102, the Patent Office bears the burden of presenting at least a prima facie case of anticipation. In re Sun, 31 USPQ2d 1451, 1453 (Fed. Cir. 1993) (unpublished). Anticipation requires that a prior art reference disclose, either expressly or under the principles

of inherency, each and every element of the claimed invention. Id. "In addition, the prior art reference must be enabling." Akzo N.V. v. U.S. International Trade Commission, 808 F.2d 1471, 1479, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). That is, the prior art reference must sufficiently describe the claimed invention so as to have placed the public in possession of it. In re Donohue, 766 F.2d 531, 533, 226 USPQ 619, 621 (Fed. Cir. 1985). "Such possession is effected if one of ordinary skill in the art could have combined the publication's description of the invention with his own knowledge to make the claimed invention." Id.

Independent claim 22, from which claims 23 and 24 depend, is reproduced below for ease of reference:

> 22. (Original) A system for storing packetized data, the system comprising:
>
> a means for receiving a transmitted data packet;
> a first parser means for analyzing a header of the data packet before a payload header is received; and
> a second parser means physically separate from the first parser means for analyzing the payload header.

> a) The *Hoogenboom* Reference Fails to Disclose a First Parser Means for Analyzing a Header of a Data Packet Before a Payload Header is Received as Recited By Claim 22

Claim 22 recites the limitations of a first parser means for analyzing a header of a data packet before a payload header is received. With respect to these limitations, the Final Office Action asserts that the *Hoogenboom* reference "clearly discloses a transport parser means 32 for analyzing a header of the data packet (Fig. 3, 82) before a payload header is received (inherently receives transmitted packet header before the payload so as to properly parse the transport packets)(col. 6, lines 23-28) as recited in claim 22." Final Action, p. 3. For ease of reference, Figure 3 of the *Hoogenboom* reference and the cited passage of the *Hoogenboom* reference are reproduced below:
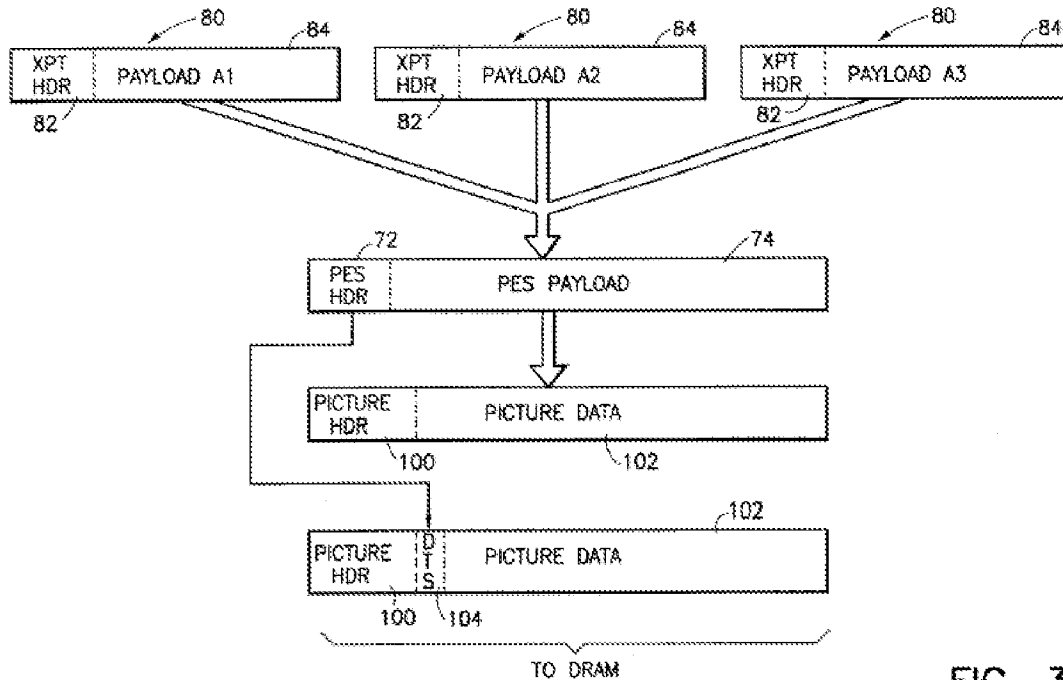
FIG. 3

The Hoogenboom Reference, Figure 3

The video decompression processor 20 receives a clock signal via terminal 12. The clock provides timing information that is used, e.g., to enable a transport syntax parser 32 to recover timing information and video information from transport packets contained in a packetized data stream input via terminal 10. An acquisition and error management circuit 34 utilizes a program clock reference (PCR) and decode time stamp (DTS) detected by a video syntax parser 40 to synchronize the start of picture decoding. This circuit sets vertical synchronization and provides global synchronization for all video decode and display functions.

The Hoogenboom Reference, col. 6, lines 23-33.

Neither Figure 3 of the *Hoogenboom* reference nor the above-cited passage of the *Hoogenboom* reference provide any disclosure related to analyzing a header of a data packet before a payload header is received as recited by claim 22. The sole passage of *Hoogenboom* related to the functionality of element 32 states only that "[a] plurality of transport packets 80 are received by the transport syntax parser 32, which strips the payload information that is necessary from successive transport packets to reconstruct a PES payload 74." The Hoogenboom Reference, col. 9, lines 25-27. This passage fails to mention a header at all, so it necessarily fails to disclose analyzing a header, much less analyzing a header of a data packet before a payload

header is received as recited by claim 22. Moreover, no other passage of *Hoogenboom* provides any such disclosure. While the Final Action asserts that the element 32 "inherently receives transmitted packet header before the payload so as to properly parse the transport packets," this subject matter is not recited by claim 22. Claim 22 recites the limitations of "**analyzing** a header of a data packet before a payload header is received," not "**receiving** a packet header before the payload" as the Final Action provides. Further, one of ordinary skill in the art will appreciate that a transport packet conventionally is received in its entirety (e.g., so that a cyclical redundancy check may be performed) and buffered before the transport packet is parsed. Thus, the Final Action fails to establish that the *Hoogenboom* reference explicitly or inherently discloses the limitations of claim 22 of a transport parser means for analyzing a header of a data packet before a payload header is received.

           b)   The *Hoogenboom* Reference Fails to Disclose a Second Parser Physically Separate from the First Parser Means as Recited by Claim 22

Claim 22 further recites the limitations of a second parser means physically separate from the first parser means. With respect to these limitations, the Final Action asserts that the *Hoogenboom* reference "clearly discloses the elements 32 and 40 being physically separate in a processor (20)." Final Action, p. 3. However, the Final Action fails to cite any passage of the *Hoogenboom* reference that "clearly discloses" these limitations. Contrary to the assertions of the Final Action, the *Hoogenboom* reference fails to disclose that elements 32 and 40 are physically separate. Although illustrated as separate features in Figure 1, it will be appreciated that the *Hoogenboom* reference characterizes Figure 1 as a "block diagram of a video decompression monitor ..." and thus illustrates the functional, but not physical, layout of the video decompression monitor. The Hoogenboom Reference, col. 5, lines 43-45. Accordingly, the Final Action fails to establish that the *Hoogenboom* reference discloses the limitations of a second parser means physically separate from the first parser means as recited by claim 22.

           c)   The *Hoogenboom* Reference Fails to Anticipate Claims 22-24

As noted above, the *Hoogenboom* reference fails to disclose the limitations of claim 22 of: a first parser means for analyzing a header of a data packet before a payload header is received; and a second parser means physically separate from the first parser means. Thus, the

Hoogenboom reference fails to disclose each and every limitation of claim 22, as well as claims 23 and 24 at least by virtue of their dependency on claim 22. Accordingly, the Final Action fails to establish that the *Hoogenboom* reference anticipates claims 22-24. Claims 22-24 therefore should be allowable under 35 U.S.C. § 102(b).

B.   Rejection of Claims 16-19 under 35 U.S.C. § 103(a):

At page 3 of the Non-Final Action, claims 16-19 were rejected under 35 U.S.C. § 103(a) as unpatentable over the *Hoogenboom* reference in view of the *Ort* reference. According to 35 U.S.C. § 103(a), "[a] patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art of such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing *a prima facie* case of obviousness. In re Fritch, 972 F.2d 1260,1262,23 U.S.P.Q. 2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce *a prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Grabiak, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. In re Bell, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. Id.

The Non-Final Action asserts that the proposed combination of the *Hoogenboom* and *Ort* references discloses or suggests the limitations of claims 16-19. In contrast with the assertions of the Final Action, neither the *Hoogenboom* reference nor the *Ort* reference discloses or suggests, alone or in combination, each and every limitation of claims 16-19.

Independent claim 16, from which claims 17-19 depend, is reproduced below for ease of reference:

> 16. (Previously Presented) A method of parsing a data packet, the method comprising:
> providing a start indicator to a first parser, the start indicator indicating a first data block
>   of the data packet, the data packet having a predetermined number of data blocks;
> analyzing at the first parser at least a portion of the first N data blocks after the start of
>   the data packet to determine a data type of a subsequent data block of the data
>   packet, wherein the subsequent data block is after the first N data blocks;
> enabling a second parser to receive the subsequent data block when the data type of the
>   subsequent data block is a first data type; and
> enabling a third parser to receive the subsequent data block when the data type of the
>   subsequent data block is a second data type.

> a)   The *Hoogenboom* and *Ort* References Fail to Disclose or Suggest
>   Analyzing at Least a Portion of A First N Data Blocks of a Data
>   Packet to Determine a Data Type of a Subsequent Data Block of
>   the Data Packet as Recited By Claim 26

Claim 16 recites the limitations of analyzing at a first parser at least a portion of a first N data blocks after the start of a data packet to determine a data type of a subsequent data block of the data packet, wherein the subsequent data block is after the first N data blocks. With respect to these limitations, the Final Action asserts that the *Hoogenboom* reference "clearly discloses . . . analyzing at least a portion of the first N data blocks (video information, or pictures comprising macroblocks, which comprises [sic] blocks)(col. 6, lines 23-28; col. 11, lines 11-18)." Final Action, p. 4. The Non-Final Action makes reference to element 102 of Figure 3 of the *Hoogenboom* reference. Non-Final Action, p. 6. Neither the Non-Final Action nor the Final

Action rely or otherwise mention the *Ort* reference with regard to these limitations. For ease of reference, the cited passages of the *Hoogenboom* reference are reproduced below (Figure 3 of the *Hoogenboom* reference is reproduced above):

> The video decompression processor 20 receives a clock signal via terminal 12. The clock provides timing information that is used, e.g., to enable a transport syntax parser 32 to recover timing information and video information from transport packets contained in a packetized data stream input via terminal 10. An acquisition and error management circuit 34 utilizes a program clock reference (PCR) and decode time stamp (DTS) detected by a video syntax parser 40 to synchronize the start of picture decoding. This circuit sets vertical synchronization and provides global synchronization for all video decode and display functions.

The Hoogenboom Reference, col. 6, lines 23-28.

> The transport syntax parser 32 will detect the presence of complete pictures in the FIFO portion of DRAM 22 by monitoring the occurrence of picture start codes and sequence end codes. If the decoder, upon examining the number of pictures in the FIFO, determines that at the start of decode time there is not an entire picture in the FIFO, then it is assumed that a skipped picture has occurred at the encoder.

Id., col. 11, lines 11-18.

Neither Figure 3 nor the above-cited passages of the *Hoogenboom* reference disclose or suggest the analysis of the first set of data blocks following the start of a data packet. Likewise, they fail to disclose or suggest that any set of blocks is analyzed to determine the data type of a subsequent data block. Moreover, they fail to disclose or suggest that any such analysis is performed by a first parser. Accordingly, the cited passages of the *Hoogenboom* reference necessarily fail to disclose or suggest the limitations of analyzing at a first parser at least a portion of a first N data blocks after the start of a data packet to determine a data type of a subsequent data block of the data packet, wherein the subsequent data block is after the first N data blocks as recited by claim 16. Instead, the passage at col. 6, lines 23-28 discloses the use of a clock signal for timing information purposes and the passage at col. 6, lines 23-28 of the *Hoogenboom* reference merely discloses that the transport syntax parser 32 detects complete pictures in the DRAM 22 "by monitoring the occurrence of picture start codes and sequence end codes." Accordingly, as the Final Action fails to establish that the *Hoogenboom* reference discloses or suggest the limitations of analyzing at a first parser at least a portion of a first N data blocks after the start of a data packet to determine a data type of a subsequent data block of the

data packet as recited by claim 16 and as the Final Action makes no assertion that these limitations are discloses or suggested by the *Ort* reference, the Final Action fails to establish that the proposed combination of the *Hoogenboom* reference and the *Ort* reference discloses or suggests at least these limitations.

> b)   Claims 16-19 are Non-Obvious in View of the *Hoogenboom* and *Ort* References

As established above, the *Hoogenboom* and *Ort* references fail to disclose or suggest at least the limitations of analyzing at a first parser at least a portion of a first N data blocks after the start of a data packet to determine a data type of a subsequent data block of the data packet, wherein the subsequent data block is after the first N data blocks as recited by claim 16. Accordingly, the proposed combination of the *Hoogenboom* reference and the *Ort* reference fails to disclose or suggest each and every limitation of claim 16, and therefore also fails to disclose each and every limitation of claims 17-19 at least by virtue of their dependency from claim 26. Accordingly, the Final Action fails to establish a *prima facie* case of obviousness in support of its rejection of claims 16-19 under 35 U.S.C. § 103(a). Claims 16-19 therefore are allowable under 35 U.S.C § 103(a).

VIII.   CONCLUSION

For the reasons given above, the Appellants respectfully request reconsideration and allowance of all claims and that this patent application be passed to issue.

Respectfully submitted,

___30 July 2007_____   _/Ryan S. Davidson/_____
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IX.   APPENDIX OF CLAIMS INVOLVED IN THE APPEAL (37 C.F.R. § 41.37(c)(1)(viii))

The text of each claim involved in the appeal is as follows:

16. (Previously Presented) A method of parsing a data packet, the method comprising:

providing a start indicator to a first parser, the start indicator indicating a first data block
        of the data packet, the data packet having a predetermined number of data blocks;

analyzing at the first parser at least a portion of the first N data blocks after the start of
        the data packet to determine a data type of a subsequent data block of the data
        packet, wherein the subsequent data block is after the first N data blocks;

enabling a second parser to receive the subsequent data block when the data type of the
        subsequent data block is a first data type; and

enabling a third parser to receive the subsequent data block when the data type of the
        subsequent data block is a second data type.

17. (Original) The method of claim 16 wherein the first parser is a hardware parser.

18. (Original) The method of claim 17, wherein the second parser is a hardware parser.

19. (Original) The method of claim 18, wherein the first and second hardware parsers are
modular and substantially physically separate from each other.

22. (Original) A system for storing packetized data, the system comprising:

a means for receiving a transmitted data packet;

a first parser means for analyzing a header of the data packet before a payload header is
        received; and

a second parser means physically separate from the first parser means for analyzing the
        payload header.

23. (Original) The system of claim 22, wherein the first parser further analyzes the
header of the data packet before a second byte of payload header is received.

24. (Original) The system of claim 23, wherein the second parser further analyzes the
payload header before a second byte of payload data is received.

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X.   EVIDENCE APPENDIX (37 C.F.R. § 41.37(c)(1)(ix))

None.

XI.   RELATED PROCEEDINGS APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

None.